

User's Manual

SBX-5363

AMD Geode 3.5" Embedded Board

User's Manual

Version 1.0

2009.10



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Chapter 1

Introduction

1.1 Copyright Notice

All Rights Reserved. The information in this document is subject to change without prior notice in order to improve the reliability, design and function. It does not represent a commitment on the part of the manufacturer. Under no circumstances will the manufacturer be liable for any direct, indirect, special, incidental, or consequential damages arising from the use or inability to use the product or documentation, even if advised of the possibility of such damages. This document contains proprietary information protected by copyright. All rights are reserved. No part of this manual may be reproduced by any mechanical, electronic, or other means in any form without prior written permission of the manufacturer.

1.2 About this User's Manual

This User's Manual is intended for experienced users and integrators with hardware knowledge of personal computers. If you are not sure about any description in this User's Manual, please consult your vendor before further handling.

1.3 Warning

Single Board Computers and their components contain very delicate Integrated Circuits (IC). To protect the Single Board Computer and its components against damage from static electricity, you should always follow the following precautions when handling it :

- 1、 Disconnect your Single Board Computer from the power source when you want to work on the inside
- 2、 Hold the board by the edges and try not to touch the IC chips, leads or circuitry
- 3、 Use a grounded wrist strap when handling computer components.
- 4、 Place components on a grounded antistatic pad or on the bag that came with the Single Board Computer, whenever components are separated from the system

1.4 Replacing the lithium battery

Incorrect replacement of the lithium battery may lead to a risk of explosion. The lithium battery must be replaced with an identical battery or a battery type recommended by the manufacturer.

Do not throw lithium batteries into the trashcan. It must be disposed of in accordance with local regulations concerning special waste.

1.5 Technical Support

1.6 Warranty

This product is warranted to be in good working order for a period of two years from the date of purchase. Should this product fail to be in good working order at any time during this period, we will, at our option, replace or repair it at no additional charge except as set forth in the following terms. This warranty does not apply to products damaged by misuse, modifications, accident or disaster.

Vendor assumes no liability for any damages, lost profits, lost savings or any other incidental or consequential damage resulting from the use, misuse of, or inability to use this product. Vendor will not be liable for any claim made by any other related party.

Vendors disclaim all other warranties, either expressed or implied, including but not limited to implied warranties of merchantability and fitness for a particular purpose, with respect to the hardware, the accompanying product's manual(s) and written materials, and any accompanying hardware. This limited warranty gives you specific legal rights.

Return authorization must be obtained from the vendor before returned merchandise will be accepted. Authorization can be obtained by calling or faxing the vendor and requesting a Return Merchandise Authorization (RMA) number. Returned goods should always be accompanied by a clear problem description.

1.7 Packing List



1 xSBX-5363
AMD Geode LX800 3.5" Embedded Board



1 x CPU Heat Sink



1 x CDROM (for Driver Used)

If any of the above items is damaged or missing, contact your vendor immediately.

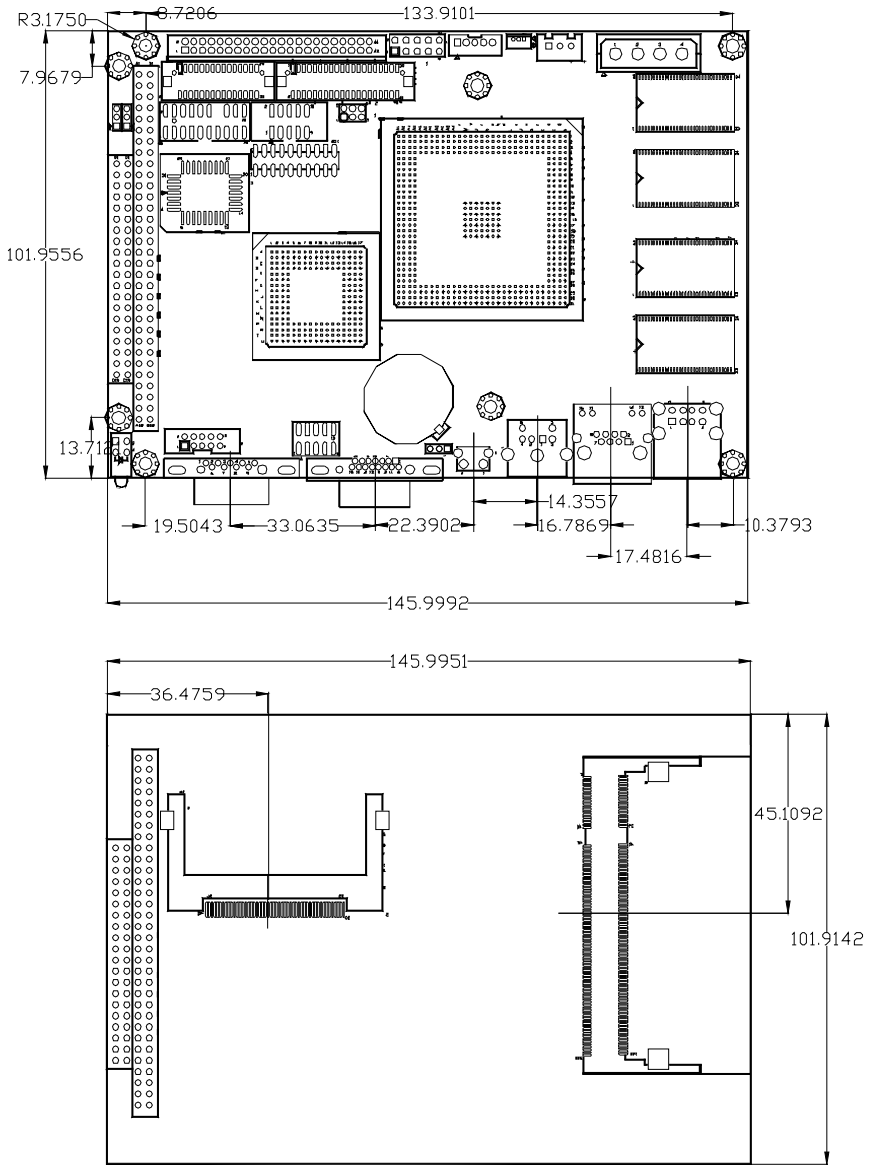
1.8 Ordering Information

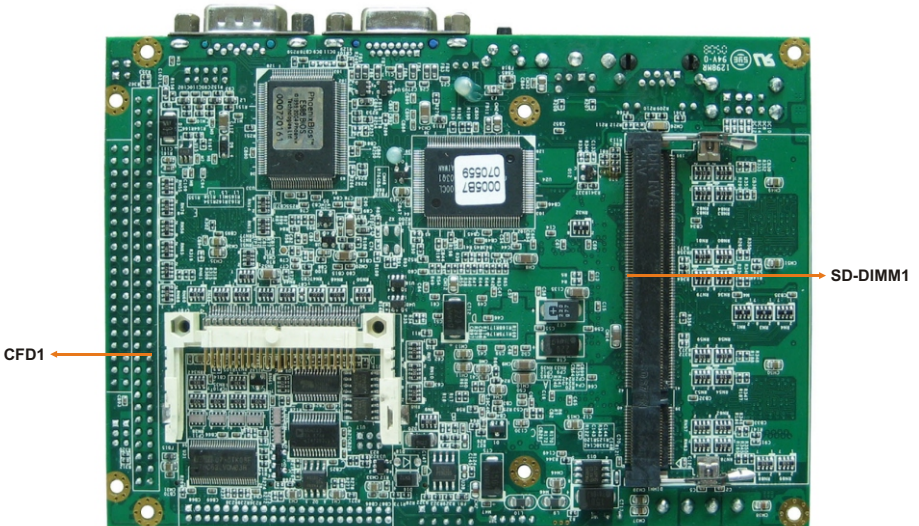
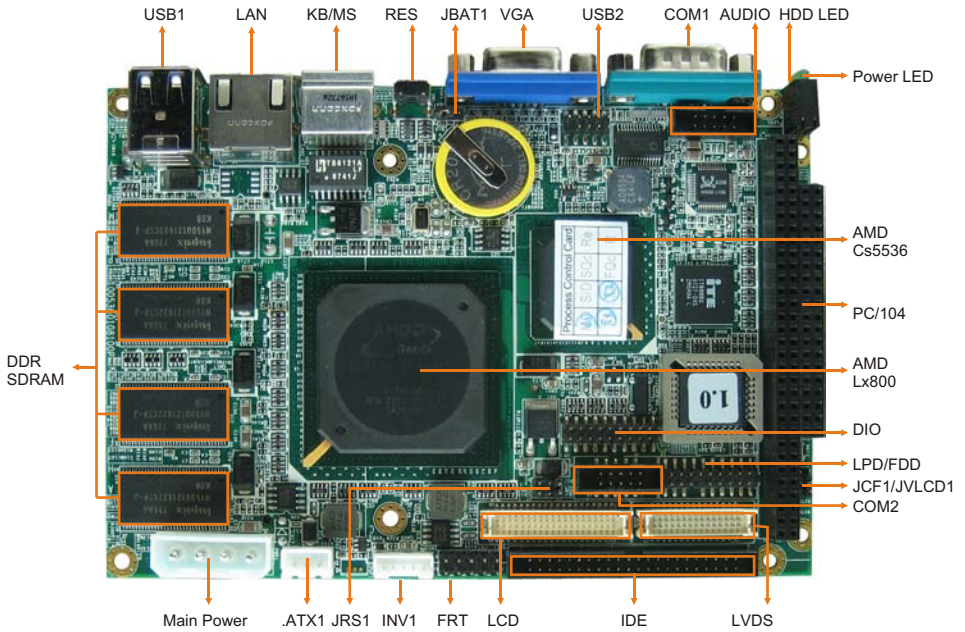
| | |
|-------------------|---|
| SBX-5363-R/ Lx800 | AMD Geode LX800(500MHz) 3.5 Embedded Board with onboard 256MB DDR SDRAM |
| SBX-5363-S/Lx800 | AMD Geode LX800(500MHz) 3.5 Embedded Board with 1x200Pin SO-DIMM |
| Cable kits | 7-in-1 Cable kits for SBX-5363 |

1.9 Specification

| | |
|-----------------------|--|
| Product Name | SBX-5363 |
| Form Factor | 3.5" Embedded Board |
| Processor | AMD Geode LX 800@0.9W 500MHz |
| Chipset | AMD Geode™ CS5536 |
| System Memory | SBX-5363 Onboard 256MB DDR SODRAM |
| | SBX-5363 1*200PIN SO-DIMM up to 1GB |
| | DDR SDRAM |
| VGA/ LCD Controller | 2D Graphics Controller integrated in AMD Geode LX800 |
| | CRT: 1920 x 1440 (85Hz) |
| | LCD: 18/24 bit TTL up to 1600 x 1200 (60Hz); |
| | 18 bit LVDS up to 1600 x 1200 (60Hz) |
| Ethernet | 1 x RTL8100CL 10/100 Base-T Fast Ethernet LAN |
| BIOS | Phoenix-Award BIOS |
| Audio | Realtek ALC203 AC'97 Codec, MIC-in/Line-in/ |
| | Line-out |
| IDE Interface | 1 x Ultra DMA 33/66/100, supports 2 IDE drives |
| Serial Port | Two COM ports: |
| | COM 1: RS-232; COM 2:RS-232/422/485 |
| Parallel Port/ Floppy | SPP/EPP/ECP mode shared with Floppy |
| K/B and Mouse | Standard PS/2 K/B&MS |
| Universal Serial Bus | 4 x USB 2.0 |
| GPIO | 16-bit GPIO (8-bit Input / Output) |
| Expansion Interface | 1 x CF II |
| | 1 x PC/104 |
| Hardware Monitor Chip | Integrated in W83627HF |
| RTC | Built-in AMD CS5536 with lithium battery |
| Operation Temp. | 0 ~ 60°C |
| Watchdog Timer | 255-level Reset |
| Dimension (L x W) | 145 x 102 mm (5.7" x 4") |

1.10 Board Dimensions







Chapter 2

Installation

2.1 Jumpers Quick Reference


Jumpers

| Label | Function |
|--------|------------------------------|
| JBAT1 | Clear CMOS |
| JCF1 | CF master or slave selected |
| JRS1 | RS-232 / 422 / 485 Selection |
| JVLCD1 | LCD Voltage Selected |

2.1.1 CMOS Jumper Settings

Type: Onboard 3-pin header (JBAT1)

| CMOS Setup (JBAT1) | JBAT1 | |
|-----------------------------|-------|----|
| Keep CMOS (default setting) | 1-2 | ON |
| Clear CMOS | 2-3 | ON |



2.1.2 CF Card Master&Slave Select

Type: Onboard 3-pin header (JCF1)

| JCF1 | | |
|-----------------------|--------|--|
| 1-2 (default setting) | Master | |
| 2-3 | Slave | |



2.1.3 Serial Port Select

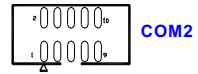
RS-232C/422/485 Mode select (JRS1)

RS-232C/422/485 Mode on COM2

The onboard COM2 port can be configured to operate in RS-422 or RS-485 modes. RS-422 modes differ in the way RX/TX is being handled. Jumper JRS1 switches between RS-232 or RS-422/485 mode. When JRS1 is set to RS-422 or 485 mode, there will be only +12V output left while JRS1 is set. All of the RS232/422/485 modes are available on COM2.

COM2

| Pin Defined | RS232 | RS422 | RS485 |
|-------------|-------|-------|-------|
| Pin1 | DCD | Tx+ | RTx+ |
| Pin2 | RXD | Tx- | RTx- |
| Pin8 | CTS | Rx+ | x |
| Pin9 | RI | Rx- | x |



| JRS1 Selection | 1-2 | 3-4 | 5-6 |
|-------------------------|-------|-------|-------|
| RS232 (default setting) | Close | Open | Open |
| RS422 | Open | Close | Open |
| RS485 | Open | Open | Close |



2.1.4 LVDS Panel Voltage Select (JVLCD1)

Type: Onboard 3-pin header (JVLCD1)

| JVLCD1 | LCD Voltage |
|----------------------|-------------|
| 1-2(default setting) | 5.0V |
| 2-3 | 3.3V |



2.2 Connectors Quick Reference

Connectors

| Label | Function |
|------------|---------------------------------|
| ATX1 | ATX Feature Connector |
| AUDIO1 | Audio Interface Connector |
| CFD1 | Compact Flash Disk |
| COM1 | Serial Port: COM1 |
| COM2 | Serial Port: COM2 |
| GPIO | 16-bit GPIO |
| FDD1 | Share with LPT Connector |
| IDE1 | Enhanced IDE Connector |
| INV1 | LCD Inverter Connector |
| JFRT1 | Front Panel Connector |
| KBM1(PS/2) | PS/2 Keyboard & Mouse Connector |
| LAN1 | 10/100M LAN1Connector |
| LCD1 | LCD Connector for TTL |
| LVDS1 | LCD Connector for LVDS |
| LPT1 | Parallel Port |
| PC104 | ISA PC-104 Interface |
| PWR1 | Power Connector |
| SW1 | Reset Connector |
| USB1 | USB Port 1,2 |
| USB2 | USB Port 3,4 |
| VGA1 | CRT SVGA Connector |

2.2.1 Ethernet Connector

Connector: LAN1

Type: One external RJ-45 on bracket

| Pin | Description | Pin | Description |
|-----|-------------|-----|-------------|
| 1 | Tx+ | 2 | Tx- |
| 3 | Rx+ | 4 | NC |
| 5 | NC | 6 | Rx- |
| 7 | NC | 8 | NC |

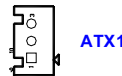


2.2.2 Power Connector

ATX Feature Connector: ATX1

Type: Onboard 1x3pin Wafer Header

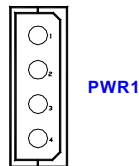
| Pin | Description |
|-----|-------------|
| 1 | #PS-ON |
| 2 | GND |
| 3 | 5VSB |



ATX Power Connector: PWR1

Type: Onboard 1x4pin Header

| Pin | Description |
|-----|-------------|
| 1 | +5V |
| 2 | GND |
| 3 | GND |
| 4 | +12V |



2.2.3 Enhanced IDE Connector

Connector: IDE1

Type: One onboard 2x22pin Header



| Pin | Description | Pin | Description |
|-----|-------------|-----|--------------|
| 1 | IDE RESET | 2 | GND |
| 3 | D7 | 4 | D8 |
| 5 | D6 | 6 | D9 |
| 7 | D5 | 8 | D10 |
| 9 | D4 | 10 | D11 |
| 11 | D3 | 12 | D12 |
| 13 | D2 | 14 | D13 |
| 15 | D1 | 16 | D14 |
| 17 | D0 | 18 | D15 |
| 19 | GND | 20 | NC |
| 21 | REQ | 22 | GND |
| 23 | IO RWITE | 24 | GND |
| 25 | IO READ | 26 | GND |
| 27 | IO READY | 28 | IDESEL |
| 29 | DACK | 30 | GND |
| 31 | IRQ14 | 32 | NC |
| 33 | ADDR1 | 34 | ATA66 DETECT |
| 35 | ADDR0 | 36 | ADDR2 |
| 37 | CS#2 | 38 | CS#3 |
| 39 | IDEACTP | 40 | GND |
| 41 | +5V | 42 | +5V |
| 43 | GND | 44 | NC |

2.2.4 Flat Panel Connector

LCD Interface Connector

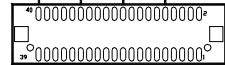
LCD1 connector is defined for TTL panel supporting up to 24-bit.

LCD2 connector is defined for LVDS panel supporting 18-bit only.

Connector: LCD1

Type: One onboard DF13-40DS Header

| Pin | Description | Pin | Description |
|-----|-------------|-----|-------------|
| 1 | VDD | 2 | VDD |
| 3 | GND | 4 | GND |
| 5 | 3.3V | 6 | 3.3V |
| 7 | BIASON | 8 | GND |
| 9 | LPD0 | 10 | LPD1 |
| 11 | LPD2 | 12 | LPD3 |
| 13 | LPD4 | 14 | LPD5 |
| 15 | LPD6 | 16 | LPD7 |
| 17 | LPD8 | 18 | LPD9 |
| 19 | LPD10 | 20 | LPD11 |
| 21 | LPD12 | 22 | LPD13 |
| 23 | LPD14 | 24 | LPD15 |
| 25 | LPD16 | 26 | LPD17 |
| 27 | LPD18 | 28 | LPD19 |
| 29 | LPD20 | 30 | LPD21 |
| 31 | LPD22 | 32 | TX2D3- |
| 33 | GND | 34 | GND |
| 35 | LCD_DOTCLK | 36 | FP_VS |
| 37 | LEDMOD | 38 | FP_HS |
| 39 | DISPEN | 40 | LCD_ENVDD |

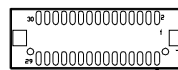


LCD1

Connector: LVDS1

Type: One onboard DF13-30DS Header

| Pin | Description | Pin | Description |
|-----|-------------|-----|-------------|
| 1 | VDD | 2 | NC |
| 3 | LVDS CLK+ | 4 | NC |
| 5 | LVDS CLK- | 6 | NC |
| 7 | GND | 8 | NC |
| 9 | LVDS TX0+ | 10 | NC |
| 11 | LVDS TX0- | 12 | NC |
| 13 | GND | 14 | NC |
| 15 | LVDS TX1+ | 16 | NC |
| 17 | LVDS TX1- | 18 | NC |
| 19 | GND | 20 | NC |
| 21 | LVDS TX2+ | 22 | NC |
| 23 | LVDS TX2- | 24 | NC |
| 25 | GND | 26 | NC |
| 27 | LVDS TX3+ | 28 | NC |
| 29 | LVDS TX3- | 30 | NC |

LVDS1**LVDS Panel Inverter Connector: INV1**

Type: One onboard 1x5pin Wafer Header

| Pin | Description |
|-----|--------------------|
| 1 | +12V |
| 2 | GND |
| 3 | Backlight on/off |
| 4 | Brightness control |
| 5 | GND |

INV1

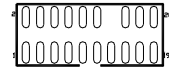
2.3 Peripheral Ports

2.3.1 Parallel Port (Share with FDD)

Connector: LPT1

Type: One onboard 2x10Pin Header

| Pin | Description | Pin | Description |
|-----|-------------|-----|-------------|
| 1 | #STB | 2 | #AFD |
| 3 | PD0 | 4 | #ERR |
| 5 | PD1 | 6 | #INIT |
| 7 | PD2 | 8 | #SLIN |
| 9 | PD3 | 10 | GND |
| 11 | PD4 | 12 | GND |
| 13 | PD5 | 14 | NC |
| 15 | PD6 | 16 | BUSY |
| 17 | PD7 | 18 | PE |
| 19 | #ACK | 20 | SLCT |



LPT1

2.3.2 USB Ports

Connector: USB1

Type: Onboard two USB ports

| Pin | Description | Pin | Description |
|-----|-------------|-----|-------------|
| 1 | +5V | 2 | USBD1- |
| 3 | USBD1+ | 4 | GND |
| 5 | +5V | 6 | USBD0- |
| 7 | USBD0+ | 8 | GND |

Connector: USB2

Type: One onboard 2x5pin Header

| Pin | Description | Pin | Description |
|-----|-------------|-----|-------------|
| 1 | +5V | 2 | +5V |
| 3 | USBD2- | 4 | USBD3- |
| 5 | USBD2+ | 6 | USBD3+ |
| 7 | GND | 8 | GND |
| 9 | GND | 10 | NC |



USB2

2.3.3 PS/2 Keyboard & Mouse

Connector: KBM1

Type: One external 6-pin Mini DIN connector on bracket

| Pin | Description | Pin | Description |
|-----|-------------|-----|-------------|
| 1 | KB_DATA | 2 | MS_DATA |
| 3 | GND | 4 | +5V |
| 5 | KB_CLK | 6 | MS-CLK |

2.3.4 CRT Display Connector

Connector: VGA1

Type: One external 15-pin D-sub female connector on bracket

| Pin | Description | Pin | Description |
|-----|-------------|-----|-------------|
| 1 | RED | 2 | GREEN |
| 3 | BLUE | 4 | NC |
| 5 | GND | 6 | GND |
| 7 | GND | 8 | GND |
| 9 | VCC | 10 | GND |
| 11 | NC | 12 | VDDAT |
| 13 | HSYNC | 14 | VSYNC |
| 15 | VDCLK | | |

2.3.5 COM1 Port with RS-232C Mode

Connector: COM1

Type: One onboard 9-pin D-sub male connector

| Pin | Description | Pin | Description |
|-----|-------------|-----|-------------|
| 1 | DCD | 2 | RXD |
| 3 | TXD | 4 | DTR |
| 5 | GND | 6 | DSR |
| 7 | RTS | 8 | CTS |
| 9 | RI | 10 | NC |

2.3.6 COM2 Port with RS-232C/422/485 Mode

1、RS-232C Mode

Connector: COM2

Type: One onboard 10-pin header

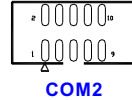
| Pin | Description | Pin | Description |
|-----|-------------|-----|-------------|
| 1 | DCD | 2 | RXD |
| 3 | TXD | 4 | DTR |
| 5 | GND | 6 | DSR |
| 7 | RTS | 8 | CTS |
| 9 | RI | 10 | NC |

2、RS-422 Mode

Connector: COM2

Type: One onboard 10-pin header

| Pin | Description | Pin | Description |
|-----|-------------|-----|-------------|
| 1 | TX+ | 2 | TX- |
| 3 | NC | 4 | NC |
| 5 | NC | 6 | NC |
| 7 | NC | 8 | RX+ |
| 9 | RX- | 10 | NC |



3、RS-485 Mode

Data+ of RS-485 is connected by pin-1

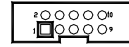
Data- of RS-485 is connected by pin-2

2.3.7 Audio Interface Port

Connector: AUDIO1

Type: One onboard 2x5pin Box Header

| Pin | Description | Pin | Description |
|-----|-------------|-----|-------------|
| 1 | LINEL | 2 | LINER |
| 3 | MIC | 4 | GND |
| 5 | GND | 6 | NC |
| 7 | AGND | 8 | AGND |
| 9 | LOUT-L | 10 | LOUT-R |



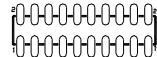
AUDIO1

2.3.8 16-bit General Purpose I/O (DIO)

Connector: DIO

Type: One onboard 2x10pin Header

| Pin | Description | Pin | Description |
|-----|-------------|-----|-------------|
| 1 | DO0 | 2 | DO1 |
| 3 | DO2 | 4 | DO3 |
| 5 | DO4 | 6 | DO5 |
| 7 | DO6 | 8 | DO7 |
| 9 | GND | 10 | GND |
| 11 | DI0 | 12 | DI1 |
| 13 | DI2 | 14 | DI3 |
| 15 | DI4 | 16 | DI5 |
| 17 | DI6 | 18 | DI7 |
| 19 | +5V | 20 | +12V |



DIO

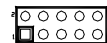
Output Port I/O Based Address : 208hex~20Fh; Pin1~Pin8 Input Port I/O Based Address : 200hex~207h; Pin11~Pin18

2.4 Switches and Indicators

Connector: JFRT1

Type: One onboard 2x5pin Header

| Pin | Description | Pin | Description |
|-----|-------------|-----|-------------|
| 1 | RESET + | 2 | RESET - |
| 3 | Power LED+ | 4 | Power LED- |
| 5 | HD LED+ | 6 | HD LED- |
| 7 | Speak+ | 8 | Speak- |
| 9 | PSON+ | 10 | PSON- |



JFRT1

2.5 CFD1: Compact Flash II Socket

Connector: CFD1

| Pin | Description | Pin | Description |
|-----|-------------|-----|-------------|
| 1 | GND | 2 | DATA3 |
| 3 | DATA4 | 4 | DATA5 |
| 5 | DATA6 | 6 | DATA7 |
| 7 | CS#1 | 8 | GND |
| 9 | GND | 10 | GND |
| 11 | GND | 12 | GND |
| 13 | +5V | 14 | GND |
| 15 | GND | 16 | GND |
| 17 | GND | 18 | ADDR2 |
| 19 | ADDR1 | 20 | ADDR0 |
| 21 | DATA0 | 22 | DATA1 |
| 23 | DATA2 | 24 | NC |
| 25 | GND | 26 | GND |
| 27 | DATA11 | 28 | DATA12 |
| 29 | DATA13 | 30 | DATA14 |
| 31 | DATA15 | 32 | CS#3 |
| 33 | GND | 34 | IO READ |
| 35 | IO WRITE | 36 | +5V |
| 37 | IRQ15 | 38 | +5V |
| 39 | CSEL | 40 | NC |
| 41 | IDE RESET | 42 | IO READY |
| 43 | NC | 44 | +5V |
| 45 | DASP | 46 | DIAG |
| 47 | DATA8 | 48 | DATA9 |
| 49 | DATA10 | 50 | GND |

Note:

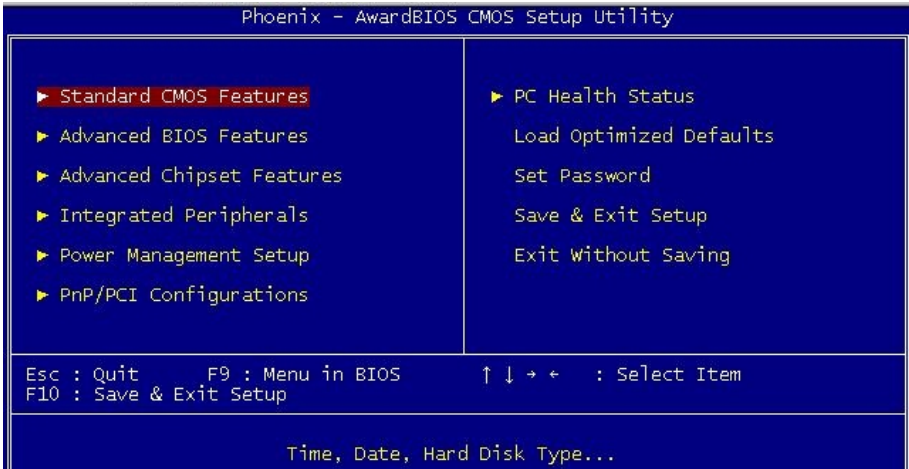
1. After hot-swapping CF II, you must restart your system for device detecting
2. CF II and ATA channel are alternative
3. CF II Socket supports up to 4GB

Chapter 3

BIOS

3.1 BIOS Introduction

The Award BIOS (Basic Input/Output System) installed in your computer system's. The BIOS provides for a standard device such as disk drives, serial ports and parallel ports. It also adds password protection as well as special support for detailed fine-tuning of the chipset controlling the entire system.



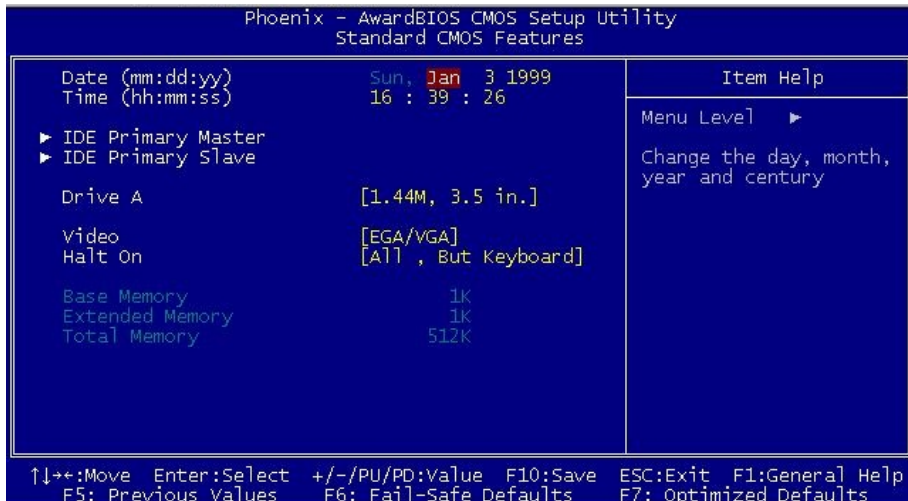
3.2 BIOS Setup

The Award BIOS provides a Setup utility program for specifying the system configurations and settings. The BIOS ROM of the system stores the Setup utility. When you turn on the computer, the Award BIOS is immediately activated. Pressing the key immediately allows you to enter the Setup utility. If you a little bit late press the key, POST (Power On Self Test) will continue with its test routines, thus preventing you from invoking the Setup. If you still wish to enter Setup, restart the system by pressing the "Reset" button or simultaneously pressing the <Ctrl>, <Alt> and <Delete> keys. You can also restart by turning the system Off and back On again. The following message will appear on the screen:

Press to Enter Setup

In general, you press the arrow keys to highlight items, <Enter> to select, the <PgUp> and <PgDn> keys to change entries, <F1> for help and <Esc> to quit. When you enter the Setup utility, the Main Menu screen will appear on the screen. The Main Menu allows you to select from various setup functions and exit choices.

3.3 Standard CMOS Features



"Standard CMOS Features" allows you to record some basic hardware configurations in your computer system and set the system clock and error handling. If the CPU card is already installed in a working system, you will not need to select this option. You will need to run the Standard CMOS option, however, if you change your system hardware configurations, such as onboard battery fails, or the configuration stored in the CMOS memory was lost or damaged.

Date

The date format is: **Day** : Sun to Sat
Month : 1 to 12
Date : 1 to 31
Year : 1999 to 2099

Time

The time format is: **Hour** : 00 to 23
Minute : 00 to 59
Second : 00 to 59

To set the date & time, highlight the "Date" & "Time" and use the <PgUp>/<PgDn> or +/- keys to set the current time.

IDE Primary HDDs / IDE Secondary HDDs

The onboard PCI IDE connectors provide Primary and Secondary channels for connecting up to four IDE hard disks or other IDE devices.

Each channel can support up to two hard disks; the first is the "Master" and the second is the "Slave".

Press <Enter> to configure the hard disk. The selections include Auto, Manual, and None. Select 'Manual' to define the drive information manually. You will be asked to enter the following items.

- Cylinder: Number of cylinders
- Head: Number of read/write heads
- Precomp: Write precompensation
- Landing Zone: Landing zone
- Sector: Number of sectors

The Access Mode selections are as follows:

- CHS (HD < 528MB)
- LBA (HD > 528MB and supports Logical Block Addressing)
- Large (for MS-DOS only)
- Auto

Drive A

It identifies the type of floppy disk drive A that has been installed in the computer. The available specifications are:

- | | | |
|---------------|----------------|----------------|
| None | 360K, 5.25 in. | 1.2M, 5.25 in. |
| 720K, 3.5 in. | 1.44M, 3.5 in. | 2.88M, 3.5 in. |

Video

This field, selects the type of video display card installed in your system. You can choose the following video display cards:

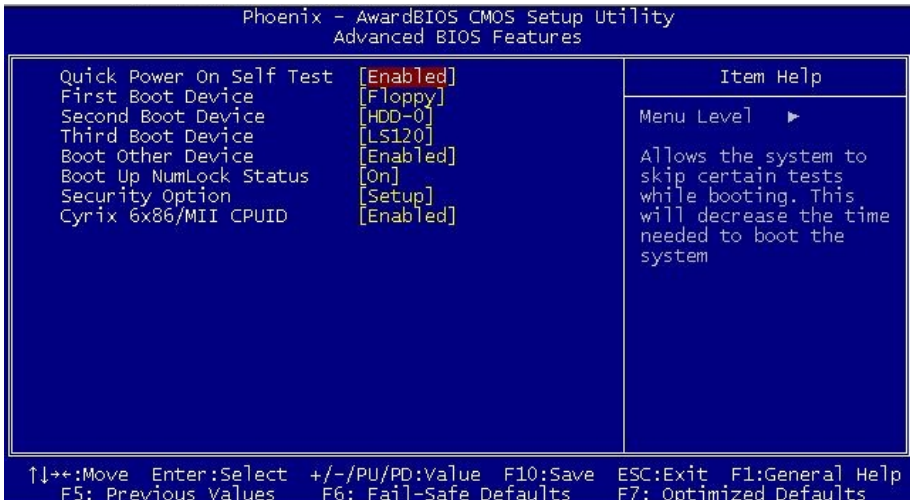
- | | |
|---------|--|
| EGA/VGA | For EGA, VGA, SEGA, SVGA or PGA monitor adapters. (default) |
| CGA 40 | Power up in 40 column mode. |
| CGA 80 | Power up in 80 column mode. |
| MONO | For Hercules or MDA adapters. |

Halt On

This field determines whether or not the system will halt if an error is detected during power up.

| | |
|----------------------|---|
| All errors (default) | Whenever the BIOS detects a non-fatal error, the system will stop and you will be prompted. |
| No errors | The system boot will not be halted for any error that may be detected. |
| All, But Keyboard | The system boot will not be halted for a keyboard error; it will stop for all other errors. |
| All, But Diskette | The system boot will not be halted for a disk error; it will stop for all other errors. |
| All, But Disk/Key | The system boot will not be halted for a keyboard or disk error; it will stop for all others. |

3.4 Advance BIOS Features



Quick Power On Self Test

This BIOS feature allows you to decrease the time it takes to boot up the computer by shortening or skipping certain standard booting procedures.

Setting: Disabled/Enabled (Default).

First/ Second/Third Boot Device

These fields determine the drive that the system searches first for an operating system. The options available include Setting:

Floppy, LS-120, HDD-0, SCSI, CDROM, HDD-1, ZIP100,
USB-FDD, USB-ZIP, USB-CDROM, USB-HDD, LAN and Disabled.

Boot Other Device

It allows the system to search for an OS from other devices other than the ones selected in the First/ Second/ Third Boot Device.

Setting: Disabled/ Enabled (Default).

Boot Up NumLock Status

It allows you to activate the NumLock function after you power up the system.

Setting: Off/On (Default).

Security Option

It allows you to limit access to the System and Setup.

When you select System, the system prompts for the User Password every time you boot up.

When you select Setup, the system always boots up and prompts for the Supervisor Password only when the Setup utility is called up.

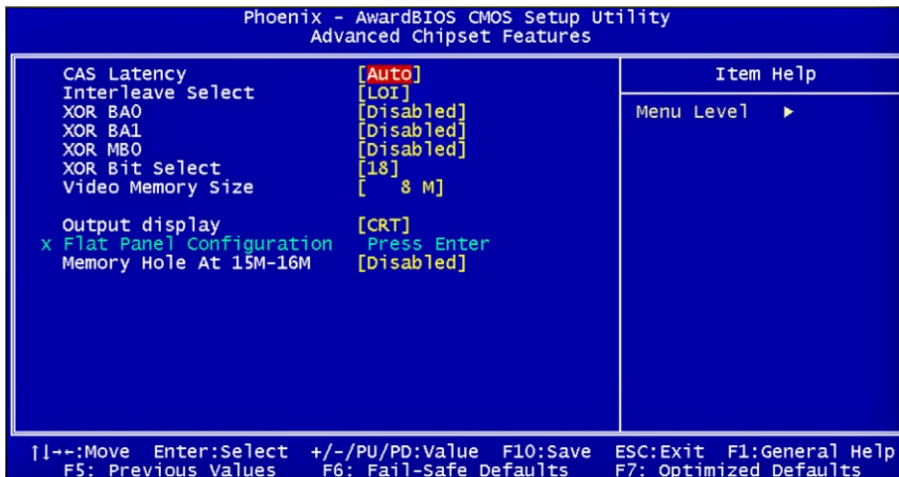
Setting: Setup (Default)/System.

Cyrix 6x86/MII CPUID

When a Cyrix 6x86/MII CPU is used, this option should be enabled to use the MMX instructions. However, if you are using NetWare 5.0, you must disable this option.

Setting: Disabled/Enabled (Default).

3.5 Advanced Chipset Features



CAS Latency

It allows CAS latency time in HCLKs. The system board designer should set the values in this field, depending on the DRAM installed. Do not change the values in this field unless you change specifications of the installed DRAM or CPU. Setting: Auto (Default)/1.5/2.0/2.5/3.0/3.5.

Interleave Select

It allows you to Use the Interleave Select option to specify how the cache memory is interleaved.

Setting: LOI (Default)/HOI.

XOR BA0

Setting: Disabled (Default)/Enabled.

XOR BA1

Setting: Disabled (Default)/Enabled.

XOR MB0

Setting: Disabled (Default)/Enabled.

XOR Bit Select

Setting: 18(Default)/19/20/21.

Video Memory Size

In order to determine how much memory is allocated to the video graphics device.

Setting: None/8M(Default)/16M/32M/64M/128M/254M.

Output display

In order to specify the display devices the system is connected to.

Setting: Flat Panel/CRT (Default)/Panel & CRT.

Flat Panel Configuration

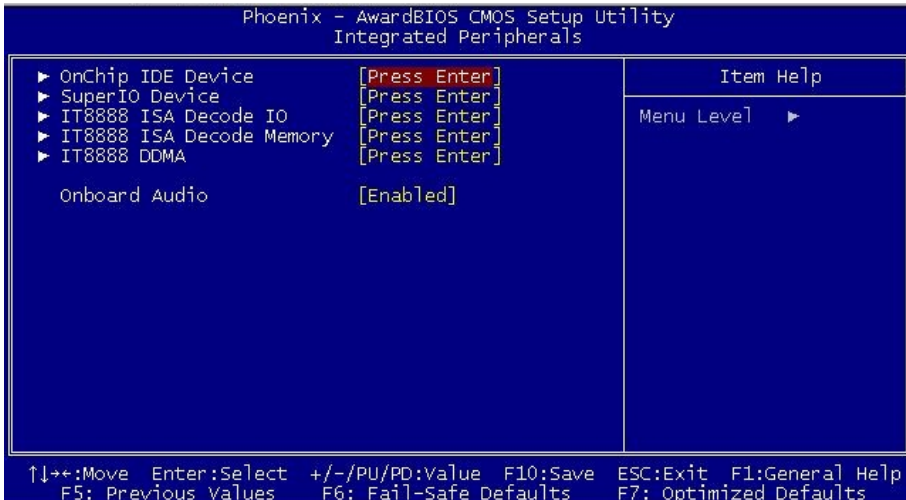
It allows you to open the Flat Panel Configuration menu.

Memory Hole At 15M-16M

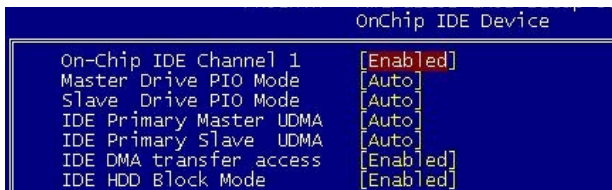
In order to improve performance, certain space in memory can be reserved for ISA cards. This memory must be mapped into the memory space below 16 MB.

Setting: Disabled (Default)/Enabled.

3.6 Integrated Peripherals



On-Chip IDE Device >>>



On-Chip IDE Channel 1

The integrated peripheral controller contains an IDE interface with support for two IDE channels. Select Enabled to activate each channel separately. Setting: Disabled/Enabled (Default).

Master/Slave Drive PIO Mode

It allows your system HDD controller to run faster.

Rather than having the BIOS issue with a series of commands that transferring to or from the disk drive, PIO (Programmed Input/Output) allows the BIOS to communicate with the controller and CPU directly.

When Auto is selected, the BIOS will select the best available mode.

Setting: Auto (Default)/Mode 0/Mode 1/Mode 2/Mode 3/Mode 4.

IDE Primary Master/Slave UDMA

It allows your system to improve disk I/O throughput to 33MB/sec with the Ultra DMA33 feature.

Setting: Disabled/Auto (Default).

IDE DMA Transfer Access

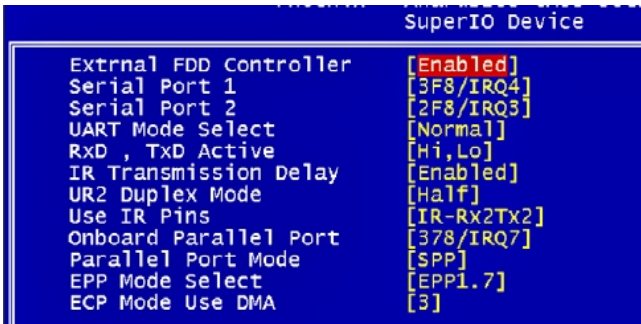
Setting: Disabled, Enabled (Default).

IDE HDD Block Mode

It allows HDD controller to use the fast block mode to transfer data to and from HDD.

Setting: Disabled/Enabled (Default).

Super IO Device>>>



External FDD Controller

Select "Enabled" if your system has a floppy disk controller (FDC) installed and you wish to use it. Select "Disabled" if your system has an add-in FDC or has no floppy drive.

Setting: Disabled/Enabled (Default).

Onboard Serial/Parallel Port

It allows you to select the onboard serial and parallel ports with their addresses.

| | | |
|----------|---------------|--------------------|
| Setting: | Serial Port 1 | 3F8/IRQ4 (Default) |
| | Serial Port 2 | 2F8/IRQ3 (Default) |
| | Parallel Port | 378/IRQ7 (Default) |

UART Mode Select

It determines the UART 2 mode in your computer.

Setting: IrDA/ASKIR/Normal (Default).

RxD, TxD Active

Setting: Hi, Hi/Hi, Lo (Default)/Lo, Hi /Lo, Lo.

IR Transmission Delay

Setting: Disabled/Enabled (Default).

UR2 Duplex Mode

Setting: Full/Half (Default).

Use IR Pins

Setting: RxD2,TxD2 / IR-Rx2Tx2 (Default).

Parallel Port Mode

Setting: SPP (Default) /EPP /ECP /ECP+EPP /Normal

EPP Mode Select

Setting: EPP1.9/EPP1.7 (Default)

ECP Mode Use DMA

Setting: 1/3 (Default).

Serial Port 3 Use IRQ

Setting: IRQ10 (Default)/IRQ11.

Serial Port 4 Use IRQ

Setting: IRQ10 /IRQ11 (Default).

IT8888 ISA Decode IO >>>

```

IT8888 ISA Decode IO
Decode I/O Space 0      [Disabled]
x Decode I/O Speed 0    Slow Speed
x Decode I/O Addr. 0 [15:4] 001
x Decode I/O Size 0     1 Bytes
Decode I/O Space 1      [Disabled]
x Decode I/O Speed 1    Subtractive Speed
x Decode I/O Addr. 1 [15:4] 001
x Decode I/O Size 1     1 Bytes
Decode I/O Space 2      [Disabled]
x Decode I/O Speed 2    Subtractive Speed
x Decode I/O Addr. 2 [15:4] 001
x Decode I/O Size 2     1 Bytes
Decode I/O Space 3      [Disabled]
x Decode I/O Speed 3    Subtractive Speed
x Decode I/O Addr. 3 [15:4] 001
x Decode I/O Size 3     1 Bytes
Decode I/O Space 4      [Disabled]
x Decode I/O Speed 4    Subtractive Speed
x Decode I/O Addr. 4 [15:4] 001

```

It allows you to use the IT8888 ISA Decode IO menu to set the IO memory range for the onboard ISA.

Decode I/O Space 0/ 1/ 2/ 3/ 4/ 5

It allows you to allocate system resources to the ISA bridge and to enable the function correctly.

Setting: Disabled, Enabled (Default).

Decode I/O Speed 0/ 1/ 2/ 3/ 4/ 5

It allows you to specify the speed of the ISA bus.

Setting: Subtractive Speed, Slow Speed, Medium Speed, Fast Speed.

Decode I/O Address 0/ 1/ 2/ 3/ 4/ 5 [15:4]

It allows you to allocate an address to the ISA bus. The address may range from 0001 to 0FFF.

Decode I/O Size 0/ 1/ 2/ 3/ 4/ 5

It allows you to specify the size of the ISA bus.

Setting: 1 Byte, 2 Bytes, 4 Bytes, 8 Bytes, 16 Bytes, 32 Bytes, 64 Bytes, 128 Bytes.

IT8888 ISA Decode Memory >>>

```

IT8888 ISA Decode Memory
Decode Memory Space 0      [Disabled]
x Decode Memory Speed 0    Subtractive Speed
x Decode Memory Addr. 0    [23: 000
x Decode Memory Size 0     16 KB
Decode Memory Space 1      [Disabled]
x Decode Memory Speed 1    Subtractive Speed
x Decode Memory Addr. 1    [23: 000
x Decode Memory Size 1     16 KB
Decode Memory Space 2      [Disabled]
x Decode Memory Speed 2    Subtractive Speed
x Decode Memory Addr. 2    [23: 000
x Decode Memory Size 2     16 KB
Decode Memory Space 3      [Disabled]
x Decode Memory Speed 3    Subtractive Speed
x Decode Memory Addr. 3    [23: 000
x Decode Memory Size 3     16 KB

```

It allows you to use the IT8888 ISA Decode Memory to set the resources for the onboard ISA bus.

Decode Memory Space 0/ 1/ 2/ 3

It allows you to allocate memory resources to the ISA bridge and to enable the function correctly.

Setting: Disabled (Default), Enabled.

Decode Memory Speed 0/ 1/ 2/ 3

It allows you to specify the memory speed of the ISA bus.

Setting: Subtractive Speed, Slow Speed, Medium Speed, Fast Speed.

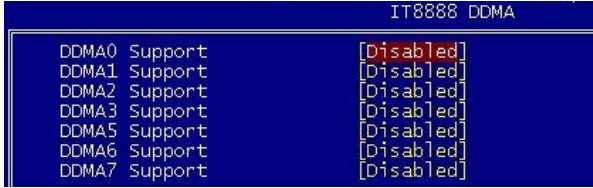
Decode Memory Addr. 0/ 1/ 2/ 3 [23:

It allows you to allocate a memory address to the ISA bus. The address may range from 0001 to 0FFF.

Decode Memory Size 0/ 1/ 2/ 3

It allows you to specify the memory size of the ISA bus.

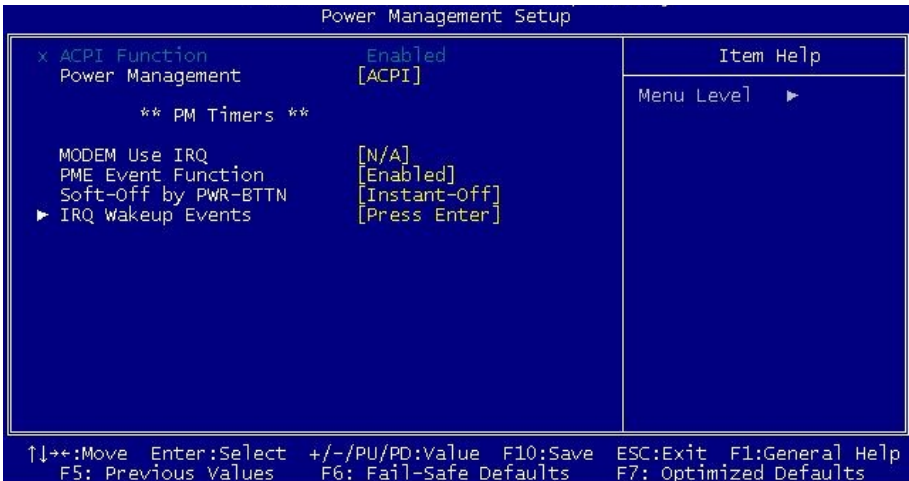
Setting: 16 KB, 32 KB, 64 KB, 128 KB, 256 KB, 512 KB, 1MB, 2MB.

IT8888 DDMA >>>

Suppose that the ISA bus card is required DMA1 & DMA5.
Set "DDMA1 Support" & "DDMA5Support" to "Enabled".

Onboard Audio

Setting: Enabled (Default), Disabled.

3.7 Power Management Setup**ACPI Function**

It supports ACPI (Advance Configuration and Power Interface).
Setting: Enabled (Default) /Disabled.

Power Management

It allows you to select the type of power saving management modes.

Setting: APM Advanced power management (APM)

ACPI (Default) Advanced Configuration and Power Interface (ACPI)

Modem Use IRQ

It sets the IRQ used by the Modem.

Setting: N/A (Default)/3/4/5/7/9/10/11.

PME Event Function

Setting: Disabled/Enabled (Default).

Soft-Off by PWR-BTTN

It defines the power-off mode when using an ATX power supply.

In the Instant Off mode, It allows powering off immediately upon pressing the power button.

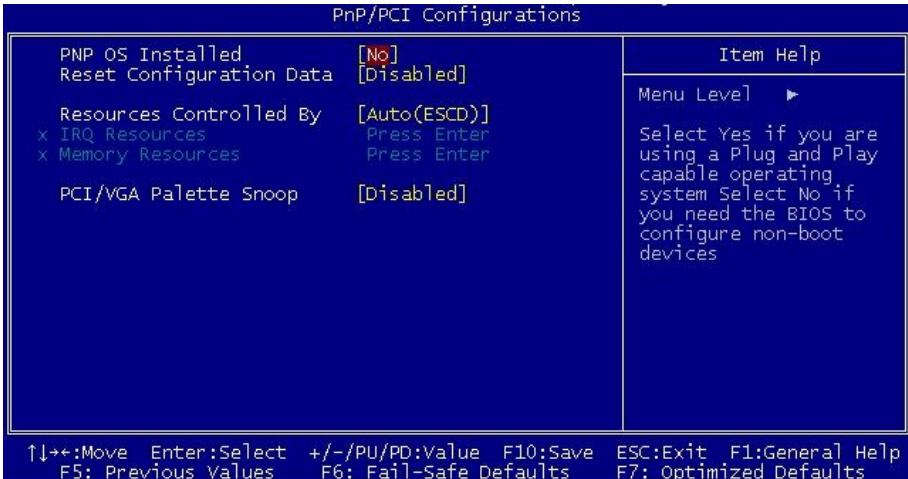
In the Delay 4 Sec mode, the system powers off when the power button is pressed for more than 4 seconds or enters the suspend mode when pressed for less than 4 seconds.

Setting: Instant-off (Default)/Delay 4 Sec.

IRQ Wakeup Events

The HDD, FDD, COM, LPT Ports, and PCI PIRQ are I/O events that can prevent the system from entering a power saving mode or can awaken the system from such a mode. When an I/O device wants to gain the attention of the operating system, it signals this by causing an IRQ to occur. When the operating system is ready to respond to the request, it interrupts itself and performs the service.

3.8 PNP/PCI Configurations



PNP OS Installed

It allows you to enable the PNP OS Install option if it is supported by the OS installed.

Setting: No (Default) /Yes.

Reset Configuration Data

It allows you to determine whether to reset the configuration data or not.

Setting: Disabled (Default) /Enabled.

Resources Controlled By

This PnP BIOS can configure all of the boot and compatible devices with the use of a PnP operating system.

Setting: Auto (ESCD) (Default) /Manual.

IRQ Resources

It allows you to configure the IRQ Resources.

Memory Resources

It allows you to configure the Memory Resources.

PCI/VGA Palette Snoop

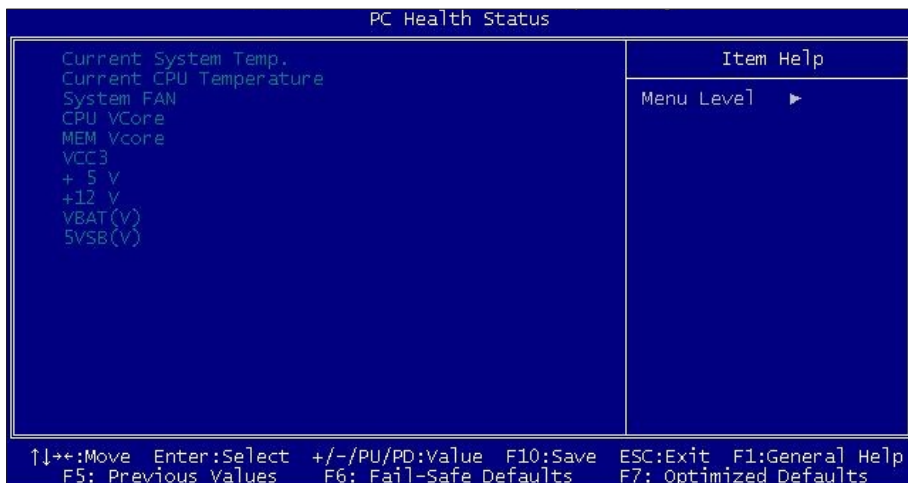
Some non-standard VGA display cards may not show colors properly. It allows you to set whether or not MPEG ISA/VESA VGA cards can display with PCI/VGA.

When "Enabled", a PCI/VGA can display with an MPEG ISA/VESA VGA card.

When "Disabled", a PCI/VGA cannot display with an MPEG ISA/VESA VGA card.

Setting: Disabled (Default) /Enabled.

3.9 PC Health Status



3.10 Load Optimized Defaults



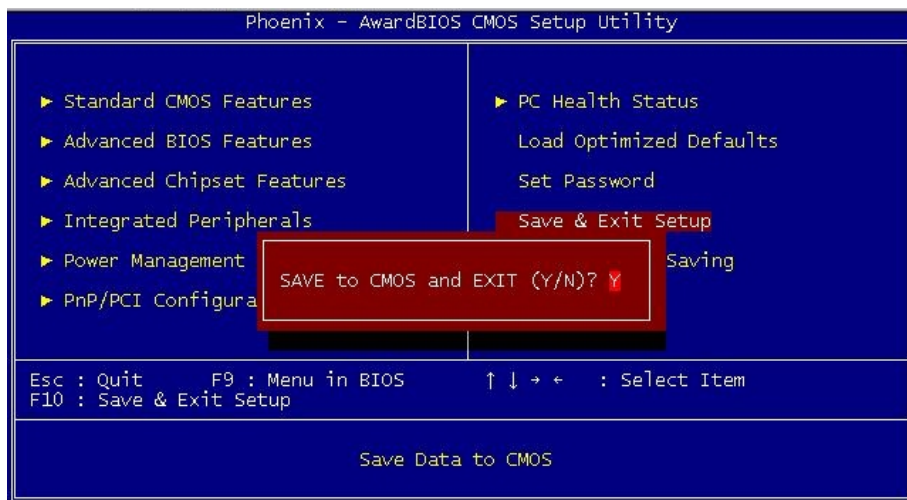
It allows you to load the default values to your system configuration. The default setting is optimal and enabled all high performance features.

3.11 Set Password



Using Password to set a password that will be used exclusively on the system. To specify a password, highlight the type you want and press <Enter>. The Enter Password: message prompts on the screen. Type the password, up to eight characters in length, and press <Enter>. And the system confirms your password by asking you to type it again. After setting a password, the screen automatically returns to the main screen. To disable a password, just press the <Enter> key when you are prompted to enter the password. A message will confirm the password to be disabled. Once the password is disabled, the system will boot, then you can enter BIOS Setup freely.

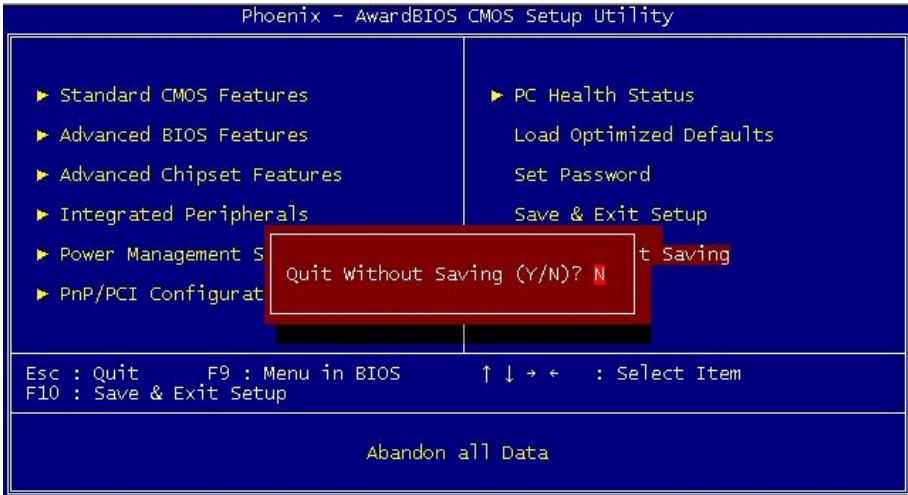
3.12 Save & Exit Setup



Typing "Y", you will quit the setup utility and save all the changes into the CMOS memory.

Typing "N", you will return to Setup utility.

3.13 Exit Without Saving



Typing "Y" will quit the Setup utility without saving the modifications.
Typing "N" will return you to Setup utility.

3.14 BIOS Beep Sound code list

| Beep Sound | Message |
|-------------------------|---|
| 1 short (Beep) | System booting is normally |
| 2 short (Beep) | CMOS setting error |
| 1 long - 1 short (Beep) | DRAM error |
| 1 long - 2 short (Beep) | Display card or monitor connected error |
| 1 long - 3 short (Beep) | Keyboard error |
| 1 long - 9 short (Beep) | ROM error |
| Long (Beep) continuous | DRAM hasn't inset correctly |
| Short (Beep) continuous | POWER supply has problem |

3.15 BIOS memory mapping

| Address | Device | Description |
|-------------------------|--------|------------------|
| E000:0000h - F000:FFFFh | | System BIOS Area |
| D000:2000h - D000:FFFFh | | Free space |
| D000:0000h - D000:1FFFh | | LAN ROM |
| C000:E000h - CF00:FFFFh | | Free space |
| C000:0000h - C000:DFFFh | | VGA BIOS |
| A000:0000h - B000:FFFFh | | VGA RAM |
| 0000:0000h - 9000:FFFFh | | DOS 640K |

3.16 Award BIOS Post Codes

| | |
|-----|---|
| CFh | Test CMOS read/write functionality |
| C0h | Early chipset initialization: Disable shadow RAM, L2 cache (socket 7 and below), program basic chipset registers |
| C1h | Detect memory: Auto detection of DRAM size, type and ECC, auto detection of L2 cache (socket 7 and below) |
| C3h | Expand compressed BIOS code to DRAM |
| C5h | Call chipset hook to copy BIOS back to E000 & F000 shadow RAM |
| 01h | Expand the Xgroup codes located in physical memory address 1000:0 |
| 02h | Reserved |
| 03h | Initial Superio_Early_Init switch |
| 04h | Reserved |
| 05h | Blank out screen; Clear CMOS error ?ag |
| 06h | Reserved |
| 07h | Clear 8042 interface; Initialize 8042 self test |
| 08h | Test special keyboard controller for Winbond 977 series Super I/O chips; Enable keyboard interface |
| 09h | Reserved |
| 0Ah | Disable PS/2 mouse interface (optional); Auto detect ports for keyboard & mouse followed by a port & interface swap (optional); Reset keyboard for Winbond 977 series Super I/O chips |
| 0Bh | Reserved |
| 0Ch | Reserved |
| 0Dh | Reserved |

| | |
|-----|---|
| 0Eh | Test F000h segment shadow to see whether it is read/write capable or not. If test fails, keep beeping the speaker |
| 0Fh | Reserved |
| 10h | Auto detect flash type to load appropriate flash read/write codes into the run time area in F000 for ESCD & DMI support |
| 11h | Reserved |
| 12h | Use walking 1's algorithm to check out interface in CMOS circuitry. Also set real time clock power status and then check for override |
| 13h | Reserved |
| 14h | Program chipset default values into chipset. Chipset default values are MODBINable by OEM customers |
| 15h | Reserved |
| 16h | Initial Early_Init_Onboard_Generator switch |
| 17h | Reserved |
| 18h | Detect CPU information including brand, SMI type (Cyrix or Intel) and CPU level (586 or 686) |
| 19h | Reserved |
| 1Ah | Reserved |
| 1Bh | Initial interrupts vector table. If no special specified, all H/W interrupts are directed to SPURIOUS_INT_HDLR & S/W interrupts to SPURIOUS_soft_HDLR |
| 1Ch | Reserved |
| 1Dh | Initial EARLY_PM_INIT switch |
| 1Eh | Reserved |
| 1Fh | Load keyboard matrix (notebook platform) |
| 20h | Reserved |
| 21h | HPM initialization (notebook platform) |
| 22h | Reserved |
| 23h | Check validity of RTC value; Load CMOS settings into BIOS stack. If CMOS checksum fails, use default value instead; Prepare BIOS resource map for PCI & PnP use. If ESCD is valid, take into consideration of the ESCD's legacy information; Onboard clock generator initialization. Disable respective clock resource to empty PCI & DIMM slots; Early PCI initialization - Enumerate PCI bus number, assign memory & I/O resource, search for a valid VGA device & VGA BIOS, and put it into C000:0 |

| | |
|-----|--|
| 24h | Reserved |
| 25h | Reserved |
| 26h | Reserved |
| 27h | Initialize INT 09 buffer |
| 28h | Reserved |
| 29h | Program CPU internal MTRR (P6 & PII) for 0-640K memory address; Initialize the APIC for Pentium class CPU; Program early chipset according to CMOS setup; Measure CPU speed; Invoke video BIOS |
| 2Ah | Reserved |
| 2Bh | Reserved |
| 2Ch | Reserved |
| 2Dh | Initialize multilanguage; Put information on screen display, including Award title, CPU type, CPU speed, etc... |
| Eh | Reserved |
| 2Fh | Reserved |
| 30h | Reserved |
| 31h | Reserved |
| 32h | Reserved |
| 33h | Reset keyboard except Winbond 977 series Super I/O chips |
| 34h | Reserved |
| 35h | Reserved |
| 36h | Reserved |
| 37h | Reserved |
| 38h | Reserved |
| 39h | Reserved |
| 3Ah | Reserved |
| 3Bh | Reserved |
| 3Ch | Test 8254 |
| 3Dh | Reserved |
| 3Eh | Test 8259 interrupt mask bits for channel 1 |
| 3Fh | Reserved |
| 40h | Test 9259 interrupt mask bits for channel 2 |
| 41h | Reserved |
| 42h | Reserved |
| 43h | Test 8259 functionality |
| 44h | Reserved |

| | |
|-----|---|
| 45h | Reserved |
| 46h | Reserved |
| 47h | Initialize EISA slot |
| 48h | Reserved |
| 49h | Calculate total memory by testing the last double last word of each 64K page; Program writes allocation for AMD K5 CPU |
| 4Ah | Reserved |
| 4Bh | Reserved |
| 4Ch | Reserved |
| 4Dh | Reserved |
| 4Eh | Program MTRR of M1 CPU; initialize L2 cache for P6 class CPU & program cacheable range; Initialize the APIC for P6 class CPU; On MP platform, adjust the cacheable range to smaller one in case the cacheable ranges between each CPU are not identical |
| 4Fh | reserved |
| 50h | Initialize USB |
| 51h | Reserved |
| 52h | Test all memory (clear all extended memory to 0) |
| 53h | Reserved |
| 54h | Reserved |
| 55h | Display number of processors (multi-processor platform) |
| 56h | Reserved |
| 57h | Display PnP logo; Early ISA PnP initialization and assign CSN to every ISA PnP device |
| 58h | Reserved |
| 59h | Initialize the combined Trend Anti-Virus code |
| 5Ah | Reserved |
| 5Bh | Show message for entering AWDFLASH.EXE from FDD (optional feature) |
| 5Ch | Reserved |
| 5Dh | Initialize Init_Onboard_Super_IO switch; Initialize Init_Onboard_AUDIO switch |
| 5Eh | Reserved |
| 5Fh | Reserved |
| 60h | Okay to enter Setup utility |
| 61h | Reserved |

| | |
|-----|--|
| 62h | Reserved |
| 63h | Reserved |
| 64h | Reserved |
| 65h | Initialize PS/2 mouse |
| 66h | Reserved |
| 67h | Prepare memory size information for function call: INT 15h ax=E820h |
| 68h | Reserved |
| 69h | Turn on L2 cache |
| 6Ah | Reserved |
| 6Bh | Program chipset registers according to items described in Setup & Auto-Configuration table |
| 6Ch | Reserved |
| 6Dh | Assign resources to all ISA PnP devices; Auto assign ports to onboard COM ports if the corresponding item in Setup is set to "AUTO" |
| 6Eh | Reserved |
| 6Fh | Initialize floppy controller; Setup floppy related fields in 40:hardware |
| 70h | Reserved |
| 71h | Reserved |
| 72h | Reserved |
| 73h | Enter AWDFLASH.EXE if: AWDFLASH.EXE is found in floppy drive and ALT+F2 is pressed |
| 74h | Reserved |
| 75h | Detect and install all IDE devices: HDD, LS120, ZIP, CDROM... |
| 76h | Reserved |
| 77h | Detect serial ports and parallel ports |
| 78h | Reserved |
| 79h | Reserved |
| 7Ah | Detect and install coprocessor |
| 7Bh | Reserved |
| 7Ch | Reserved |
| 7Dh | Reserved |
| 7Eh | Reserved |
| 7Fh | Switch back to text mod if full screen logo is supported: if errors occur, report errors & wait for keys, if no errors occur or F1 key is pressed continue - Clear EPA or customization logo |

| | |
|-----|---|
| 80h | Reserved |
| 81h | Reserved |
| 82h | Call chipset power management hook: Recover the text font used by EPA logo (not for full screen logo), If password is set, ask for password |
| 83h | Save all data in stack back to CMOS |
| 84h | Initialize ISA PnP boot devices |
| 85h | Final USB initialization; NET PC: Build SYSID structure; Switch screen back to text mode; Set up ACPI table at top of memory; Invoke ISA adapter ROM's; Assign IRQ's to PCI devices; Initialize APM; Clear noise of IRQ's |
| 86h | Reserved |
| 87h | Reserved |
| 88h | Reserved |
| 89h | Reserved |
| 90h | Reserved |
| 91h | Reserved |
| 92h | Reserved |
| 93h | Read HDD boot sector information for Trend Anti-Virus code |
| 94h | Enable L2 cache; Program boot up speed; Chipset final initialization; Power management final initialization; Clear screen and display summary table; Program K^ write allocation; Program P6 class write combining |
| 95h | Program daylight saving; Update keyboard LED and typematic rate |
| 96h | Build MP table; Build and update ESCD; Set CMOS century to 20h or 19h; Load CMOS time into DOS timer tick; Build MSIRQ routing table |
| FFh | Boot attempt (INT 19h) |



Chapter 4

Appendix

4.1 I/O Port Address Map

Each peripheral device in the system is assigned a set of I/O port addresses which also becomes the identity of the device.

The following table lists the I/O port addresses used.

| Address Device | Description |
|-----------------------|---|
| EE000000 - EFFFFFFF | Advanced Micro Devices Win 2K/XP Graphics Driver |
| EFD00000 - EFDFFFFF | PCI standard PCI-to-PCI bridge |
| EFE00000 - EFEFFFFFFF | PCI standard PCI-to-PCI bridge |
| EFFC0000 - EFFDFFFF | Intel(R) PRO/100 M Desktop Adapter |
| EFFE8000 - EFFEBFFF | Advanced Micro Devices Win 2K/XP Graphics Driver |
| EFFEC000 -EFFEFFFF | Advanced Micro Devices Win 2K/XP Graphics Driver |
| EFFF0000 - EFFF3FFF | Advanced Micro Devices Win 2K/XP Graphics Driver |
| EFFF4000 - EFFF7FFF | Geode LX AES Crypto Driver |
| EFFF8000 - EFFFBFFF | Advanced Micro Devices Win 2K/XP Graphics Driver |
| EFFFD000 -EFFFDFFF | Standard Enhanced PCI to USB Host Controller |
| EFFFE000 - EFFFFFFF | Standard OpenHCD USB Host Controller |
| EFFFF000 - EFFFFFFF | Intel(R) PRO/100 M Desktop Adapter |
| 000A0000 - 000BFFFF | PCI bus |
| 000A0000 - 000BFFFF | Advanced Micro Devices Win 2K/XP Graphics Driver |
| 000C8000 - 000DFFFF | PCI bus |
| 0F7C0000 - FEBFFFFF | PCI bus |
| 00000000 - 00000CF7 | PCI bus |
| 00000000 - FFFFFFFF | ISAPNP Read Data Port |
| 00000060 - 00000060 | Standard 101/102-Key or Microsoft Natural PS/2 Keyboard |
| 00000064 - 00000064 | 00000064 - 00000064 Standard 101/102-Key or Microsoft Natural PS/2 Keyboard |
| 00000070 - 00000073 | System CMOS/real time clock |

| | |
|---------------------|---|
| 00000170 - 00000177 | Secondary IDE Channel |
| 000001F0 - 000001F7 | Primary IDE Channel |
| 00000274 - 00000277 | ISAPNP Read Data Port |
| 00000279 - 00000279 | ISAPNP Read Data Port |
| 000002F8 - 000002FF | Communications Port |
| 00000376 - 00000376 | Secondary IDE Channel |
| 00000378 - 0000037F | Printer Port |
| 000003B0 - 000003BA | Advanced Micro Devices Win 2K/XP Graphics Driver |
| 000003C0 - 000003DF | Advanced Micro Devices Win 2K/XP Graphics Driver |
| 000003F0 - 000003F5 | Standard floppy disk controller |
| 000003F6 - 000003F6 | Primary IDE Channel |
| 000003F7 - 000003F7 | Standard floppy disk controller |
| 000003F8 - 000003FF | Communications Port |
| 00000778 - 0000077B | Printer Port |
| 00000D00 - 0000AC17 | PCI bus |
| 0000AC20 - 0000FFFF | PCI bus |
| 0000E000 - 0000EFFF | PCI standard PCI-to-PCI bridge |
| 0000FD00 - 0000FD7F | GeodeLX Audio Driver (WDM) |
| 0000FE00 - 0000FE0F | Standard Dual Channel PCI IDE Controller |
| 0000FF00 - 0000FF3F | Intel(R) PRO/100 M Desktop Adapter |

4.2 Interrupt Request Lines (IRQ)

Peripheral devices use interrupt request lines to notify CPU for the service required. The following table shows the IRQ used by the devices on board.

| Level | Function |
|--------------|---|
| IRQ 01 | Standard 101/102-Key or Microsoft Natural PS/2 Keyboard |
| IRQ 03 | Communications Port |
| IRQ 04 | Communications Port |
| IRQ 05 | Standard Enhanced PCI to USB Host Controller |
| IRQ 05 | Standard OpenHCD USB Host Controller |
| IRQ 06 | Standard floppy disk controller |
| IRQ 08 | System CMOS/real time clock |
| IRQ 09 | Microsoft ACPI-Compliant System |
| IRQ 10 | Advanced Micro Devices Win 2K/XP Graphics Driver |
| IRQ 10 | Geode LX AES Crypto Driver |
| IRQ 11 | Intel(R) PRO/100 M Desktop Adapter |
| IRQ 11 | GeodeLX Audio Driver (WDM) |
| IRQ 12 | PS/2 Compatible Mouse |
| IRQ 14 | Primary IDE Channel |